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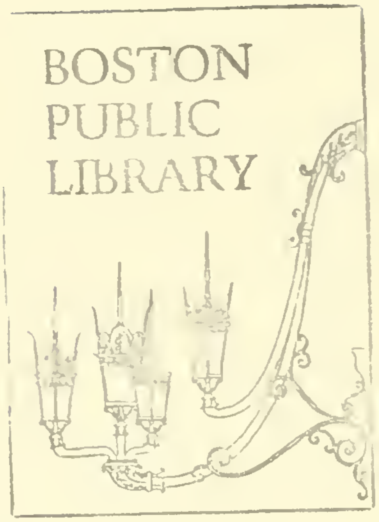

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ECONOMIC AND FISCAL IMPACTS
BOSTON CROSSING PROJECT

Boston, Massachusetts

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Prepared for:

Campeau Massachusetts, Inc.

Prepared by:

Cambridge Systematics, Inc.

Revised September 1988

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EXECUTIVE SUMMARY

This report presents estimates of the economic and fiscal impacts of the renovations and expansion of the mixed-use development at Boston Crossing (formerly called Lafayette Place) in Boston, Massachusetts proposed by Campeau Massachusetts, Inc. The physical make-up of the project is described in Table 1. The economic impacts of the project, presented in Tables 4A and 4B, are the changes in the aggregate economy of Boston, adjacent communities, and other areas in Massachusetts, which can be attributed to the project. The fiscal impacts of the project, presented in Tables 7A and 7B, are changes in the budget of the City of Boston which can be attributed to the project.

Average annual direct benefits during the estimated three year construction phase are forecast to be 1,009 construction jobs with a total payroll of $52.5 million. These generate total annual statewide economic benefits of 2,740 full-time jobs, a payroll of $93 million, and business sales of $278 million.

Average annual direct permanent benefits, once the entire project is completed and in operation, are estimated to include 11,163 retail and office jobs on-site. These generate annual statewide economic benefits totalling 26,723 full-time jobs, a payroll of $715 million, and business sales of $2.1 billion.

When complete, the new Boston Crossing will generate between $11.2 and $14.8 million in gross revenues annually directly to the City of Boston.

The development will generate between $4.5 and $8.2 million in revenues annually for the City of Boston, net of all costs associated with the provision of services to the development or to new residents who will live in the City as a result of the development.

The development will produce between $2.14 and $2.99 annually in revenues to the City for each $1.00 in expenditures which it will require. In addition, the project will generate $20 million in state sales tax revenue and $28.6 million in state personal income tax revenue.

The proposed project will be one of the four largest property taxpayers in the City of Boston.

The project could create as many as 8,000 entry-level jobs.

INTRODUCTION

This report presents estimates of the economic and fiscal impacts resulting from the renovations and expansion of the mixed-use development at Boston Crossing (formerly called Lafayette Place) in downtown Boston, Massachusetts proposed by Campeau Massachusetts, Inc. (referred to hereafter as "Campeau"). The expansion will increase the retail space, adding a second department store anchor to the existing retail complex, which includes the Jordan Marsh department store. It also includes constructing 1.6 million square feet of office space, refurbishing two transit stations, and constructing day-care and cultural facilities. (See Table 1.)

The economic impacts of the project are the changes in the aggregate economy of Boston, adjacent communities, and other areas in Massachusetts, which can be attributed to the project. The fiscal impacts of the project are changes in the budget of the City of Boston which can be attributed to the project.

The report is in two sections: The first section contains the estimates of economic impacts, and the second reports on the estimates of fiscal impacts. Estimates of the economic impacts include the number of new jobs created, the payroll generated by those jobs, and the sales of goods which will be generated as a consequence of the Boston Crossing project. In the second section, estimates are presented of the major impacts of the Boston Crossing project on all local revenues generated by the City of Boston, and on the City's expenditures for public safety, schools, general government, and all other functions.

Each section includes a discussion detailing the assumptions underlying the analysis and explaining the methodology used.

TABLE 1

Utilization of Space
Boston Crossing Complex

	Existing	Proposed	Net Increase
Retail Anchor	450,000 sf [1]	675,000 sf [2]	225,000 sf
Retail Other	250,000 sf [3]	400,000 sf [4]	150,000 sf
Office	195,000 sf [5]	1,600,000 sf [6]	1,405,000 sf
Warehouse	192,600 sf [7]	79,000 sf [8]	(116,000) sf
Cultural	None	50,000 sf [9]	50,000 sf
TOTAL	1,067,600 sf	3,116,000 sf	+2,048,400 sf
Parking	1,149 spaces	2,024 spaces	875 spaces

1. Current Jordan Marsh.
2. Reconstruction of Jordan Marsh and construction of a second anchor store.
3. Current Lafayette Place.
4. Expansion of Lafayette Place.
5. Existing Jordan Marsh office space.
6. New Lafayette Place office space.
7. Existing Jordan Marsh warehouse.
8. Reconstructed Jordan Marsh warehouse.
9. Theater, day-care, and cultural/community center.

Prepared by Cambridge Systematics, Inc., September 1988, using data provided by Campeau.

I. ECONOMIC IMPACTS

FINDINGS

The major components of the proposed Boston Crossing project are listed in Table 1, based upon information provided in September, 1988 by Campeau. The construction costs are shown in Table 2. The economic impacts forecast to be generated by the Boston Crossing project are calculated in terms of three measures: (1) The number of jobs created as a result of the project; (2) The dollar value of the payroll associated with these jobs; and (3) The dollar value of the purchases of final goods engendered by the project. They are summarized in Table 3.

Construction Period Benefits

Construction period benefits are forecast to total 3,028 jobs at the construction site with a payroll of $157.5 million. The timing of these jobs will depend on the final phasing of construction. Construction of the project generates statewide economic benefits, including indirect benefits, totalling 8,219 full-time jobs, with a payroll of $280 million, and business sales of $834 million. (See Table 4A.)

Permanent Benefits

There will be a net direct gain of 9,349 permanent jobs, payroll of $235 million, and sales of $895 million as a result of the project, above current levels of employment and sales at Jordan Marsh and the Boston Crossing mall. In addition, the project will generate 15,566 additional indirect jobs, with payroll of $392 million and sales of $910 million.

Average total annual direct and indirect benefits, once the entire project is completed and in operation, are estimated to be 26,723 full-time jobs, a total payroll of $715 million, and sales of goods of $2.1 billion. (See Table 4B.)

Campeau has agreed to participate in the Boston Compact and will work to ensure that half of the direct jobs provided by the project go to Boston residents. Of the total of 11,163 direct jobs to result from the project, 5,581 will go to Boston residents. Many of these jobs will be at the entry level. Using the industry-occupation matrix for Boston prepared by the Massachusetts Division of Employment Security in

TABLE 2

Construction Cost Information
Boston Crossing (Lafayette Place) Re-Development
Campeau Massachusetts, Inc.

Project Component	Size	Construction Cost psf	Total Construction Cost	Construction Labor Cost
RETAIL				
JM/Store	400,000 sq ft	$75	$30,000,000	$12,000,000
JM/Back	106,000 sq ft	$75	$7,950,000	$3,180,000
LP Mall	645,000 sq ft	$120	$77,400,000	$30,960,000
Bloomingdale's	275,000 sq ft	$75	$20,625,000	$8,250,000
OFFICE				
Building I (LP)	750,000 sq ft	$135*	$101,250,000	$40,500,000
Building II (HP)	850,000 sq ft	$135*	$114,750,000	$45,900,000
PARKING	1,000 spaces	$35,000	$35,000,000	$14,000,000
CULTURAL				
Theater (199 seat)	10,000 sq ft	$125	$1,250,000	$500,000
Community/Cultural Center	40,000 sq ft	$80	$3,200,000	$1,280,000
SUBWAY STATION REHABILITATION				
Station I	4,700 sq ft	$175	$822,500	$329,000
Station II	8,000 sq ft	$175	$1,400,000	$560,000
PROJECT TOTAL			$393,647,500	$157,459,000
ANNUAL TOTAL			$131,215,833	$52,486,333
Estimated Full Development Cost			$511,741,750	

* Includes tenant allowance.

ASSUMPTIONS:

Labor cost share of construction cost	40%
Construction hourly wage rate	$25.00
Construction period: 1989-1992 (years)	3

Construction work week assumed to be 40 hours for 52 weeks (=2080 hrs/yr)

NOTE: The BRA uses a construction work week of 37.5 hrs/wk. for its computation, resulting in estimated job levels that are 6.25% higher than those indicated here.

The BRA uses a construction hourly wage rate of $16.83 (or $35,000 per 2,080 hour year). This results in job levels that are 49% higher than those reported here.

If these assumptions had been used for this study, our estimates of total construction period jobs in Table 4A would be 4,688 instead of 3,028.

TABLE 2
(continued)

The project components are listed in the Tables using abbreviated names. These abbreviations indicate the following components of the project, which are listed by function:

Retail components
  JM/Store - The main Jordan Marsh department store retail selling space
  JM/Back - Internal office and merchandise storage space within the Jordan Marsh store
  LP Mall - The expanded Lafayette Place retail shopping mall
  Bloomingdales - A new department store

Office components
  I (LP) - Office building I on Jordan Marsh site.
  II (HP) - Office building II, on Hayward Place, adjacent to the current Lafayette Place mall.

The Lafayette Hotel is under separate ownership and is not part of the Boston Crossing project.

Source: Cambridge Systematics, Inc. from data provided by Campeau Massachusetts, Inc.

TABLE 3

Boston Crossing - Net Permanent Economic Impacts

	Current	Proposed	Net
Direct Impacts			
Jobs	1,814	11,163	9,349
Payroll	$33,145,000	$267,943,484	$234,798,484
Sales	$136,800,000	$1,031,494,000	$894,694,000
Indirect Impacts			
Jobs	2,529	15,560	13,031
Payroll	$55,292,180	$446,980,825	$391,688,645
Sales	$139,097,312	$1,048,816,100	$909,718,788
Total Impacts			
Jobs	4,343	26,723	22,380
Payroll	$88,437,180	$714,924,309	$626,487,129
Sales	$275,897,312	$2,080,310,100	$1,804,412,788

Sources: Campeau Massachusetts Inc. and Cambridge Systematics Inc.

1985, the number of entry-level jobs can be estimated based on the mix of retail and office space currently expected, and the types of tenants expected. On this basis, it is estimated that the project could include as many as 8,080 entry-level jobs. These are estimated to be divided between retail (3,100) and office (4,980) occupations.

TABLE 4A

Construction Phase Economic Impacts of Boston Crossing Re-Development

Project Component	Direct Benefits Created			Indirect Benefits Created			Total Benefits Created		
	Jobs	Construction Payroll	Construction Cost	Jobs	Payroll	Sales	Jobs	Payroll	Sales
RETAIL									
JM	231	$12,000,000	$30,000,000	395	$9,288,000	$33,540,000	626	$21,288,000	$63,540,000
JM/Back	61	$3,180,000	$7,950,000	105	$2,461,320	$8,888,100	166	$5,641,320	$16,838,100
LP Mall	595	$30,960,000	$77,400,000	1,020	$23,963,040	$86,533,200	1,615	$54,923,040	$163,933,200
Bloomingdale's	159	$8,250,000	$20,625,000	272	$6,385,500	$23,058,750	430	$14,635,500	$43,683,750
OFFICE									
I (LP)	779	$40,500,000	$101,250,000	1,334	$31,347,000	$113,197,500	2,113	$71,847,000	$214,447,500
II (HP)	883	$45,900,000	$114,750,000	1,512	$35,526,600	$128,290,500	2,394	$81,426,600	$243,040,500
PARKING	269	$14,000,000	$35,000,000	461	$10,836,000	$39,130,000	730	$24,836,000	$74,130,000
CULTURAL									
Theater (199 seat)	10	$500,000	$1,250,000	16	$387,000	$1,397,500	26	$887,000	$2,647,500
Community/Cultural Center	25	$1,280,000	$3,200,000	42	$990,720	$3,577,600	67	$2,270,720	$6,777,600
SUBWAY STATION REHABILITATION									
Station I	6	$329,000	$822,500	13	$333,277	$907,711	19	$662,277	$1,730,211
Station II	11	$560,000	$1,400,000	22	$567,280	$1,545,040	33	$1,127,280	$2,945,040
PROJECT TOTAL	3,028	$157,459,000	$393,647,500	5,190	$122,085,737	$440,065,901	8,219	$279,544,737	$833,713,401
ANNUAL TOTAL	1,009	$52,486,333	$131,215,833	1,730	$40,695,246	$146,688,634	2,740	$93,181,579	$277,904,467

Source: Cambridge Systematics, Inc.

TABLE 4B

Permanent Economic Impacts of Boston Crossing Re-Development

Project Component	Direct Benefits Created			Indirect Benfits Created			Total Benefits Created		
	Jobs	Payroll	Sales	Jobs	Payroll	Sales	Jobs	Payroll	Sales
RETAIL									
JM/Store	1,280	$22,400,000	$80,000,000	1,256	$40,120,000	$74,800,000	2,536	$62,520,000	$154,800,000
JM/Back - Office	122	$3,402,000	NA	NA	NA	NA	122	$3,402,000	$0
JM/Back - Warehouse	53	$711,356	NA	NA	NA	NA	53	$711,356	$0
LP Mall	1,600	$24,000,000	$130,000,000	2,521	$77,595,000	$121,550,000	4,121	$101,595,000	$251,550,000
Bloomingdale's	880	$15,400,000	$96,250,000	2,171	$59,819,375	$89,993,750	3,051	$75,219,375	$186,243,750
OFFICE									
I (LP)	3,375	$94,500,000	$337,500,000	4,496	$125,887,500	$356,670,000	7,871	$220,387,500	$694,170,000
II (HP)	3,825	$107,100,000	$382,500,000	5,095	$142,672,500	$404,226,000	8,920	$249,772,500	$786,726,000
PARKING									
(Hayward Place)	14	$205,078	$3,744,000	NA	NA	NA	14	$205,078	$3,744,000
CULTURAL									
Theater (199 seats)	5	$75,000	$300,000	2	$147,300	$315,270	7	$222,300	$615,270
Community/Cultural Center	10	$150,000	$1,200,000	18	$739,200	$1,261,080	28	$889,200	$2,461,080
PROJECT TOTAL	11,163	$267,943,434	$1,031,494,000	15,560	$446,980,875	$1,048,816,100	26,723	$714,924,309	$2,080,310,100

NOTE: NA indicates that the indirect impacts of this component are counted in the JM/store indirect impacts.

Source: Cambridge Systematics, Inc.

SOURCES

For retail workers/1,000 sq. ft.: Boston Redevelopment Authority, Philadelphia City Planning Commission, Urban Land Institute, Shopping Center Development Handbook; and studies of downtowns and shopping centers in California, Illinois, Michigan, Ohio and Utah.

For office workers/1,000 sq. ft.: Boston Redevelopment Authority, Office Industry Survey, Philadelphia City Planning Commission, San Diego, ECFA, Institute of Traffic Engineers Trip Generation Manual and Urban Land Institute Office Development Handbook and Downtown Development Handbook.

For annual payroll per job: Massachusetts Division of Employment Security and Bureau of Labor Statistics, US Department of Labor.

For employment multipliers: Cambridge Systematics, Inc. from the RIMS II Model for Massachusetts, prepared by the Bureau Of Economic Analysis of the US Department of Commerce. These multipliers have been adjusted for wage increases due to inflation through 1987.

Other inputs developed by Cambridge Systematics.

METHODOLOGY FOR ESTIMATION OF ECONOMIC IMPACTS

To estimate economic impacts, it is important to first distinguish among the different types of impacts a development is likely to create. The most important economic impacts likely to be generated by the Boston Crossing project are jobs, the payroll paid to the individuals holding the jobs, and the expenditures for (or purchases of) goods and non-employee services by both the job-holders and their employers. These are all community economic benefits.

Some of these impacts - jobs, payroll, and purchases, will occur on the project site, as a direct result of the project, and are called on-site benefits; others will occur away from the project site, and are called off-site (or community) benefits. Most of the direct impacts of the project will occur on-site and many of the indirect impacts will occur away from the site, although this relationship may not always be true. Direct impacts are defined as those which occur as a direct or immediate consequence of an economic transaction resulting from the project's construction or operation, e.g., the hiring of a construction worker or a retail store employee. Indirect (or second-order) impacts are defined as those which occur as a consequence of a direct impact, e.g., the increased employment to manufacture and supply construction materials. There are also induced impacts, e.g., a construction worker buying additional groceries and supporting additional restaurant sales. The impacts enumerated in the preceding section are the most significant direct and indirect benefits generated by the Boston Crossing project.

Since job creation is the most clear-cut consequence of the project, it is used as the basis for estimating the dollar magnitude of all other community economic impacts. There are two major types of jobs associated with development: temporary jobs created during the construction of the project; and permanent jobs which occur once the development begins operation. As was noted above, these two types of jobs are further separated into direct and indirect jobs. While it has not been possible to estimate how many of the indirect jobs will be filled by Boston residents and how many by residents of other Massachusetts communities, it is possible to provide rough estimates of the different occupation types that will be needed and the industries where the jobs are likely to occur.

JOBS

CONSTRUCTION PERIOD JOBS

Construction period jobs are those temporary jobs created by a new development during the construction of the project. The direct jobs are primarily those of the laborers and tradesmen working on the actual construction of the development, although this category also includes architects, engineers, and other professionals involved in the construction and pre-operation phase of the development. Indirect jobs include those involved in the manufacture of construction materials and equipment used by the project, as well as jobs created at restaurants, retail stores, and other establishments which serve the construction workers while they are working on the project.

Estimation of Direct Construction Job Impacts

Costs for the construction of the proposed project are shown on Table 2. The direct construction job estimates are based on construction worker wage rates and labor costs. Construction labor costs are assumed to be 40 percent of total construction costs, and are based on the estimated construction budget of the proposed development project, as provided by Campeau. Annual construction labor costs are divided by the average annual cost of a construction worker to determine the number of direct jobs created. The average full-time equivalent annual cost of a construction worker was determined to be $52,000, based on an hourly wage rate of $25.00 for 2080 hours. This hourly rate is based on average union wage rates - including direct benefits - for all types of construction workers in Boston (Employment Standards Administration, US Department of Labor, Boston Regional Office. May, 1988.) Since actual construction employment can fluctuate widely from month to month, depending on construction scheduling, weather conditions, and other factors, construction employment is here assumed to be uniformly spread over time to estimate overall job impacts.

Estimation of Indirect Construction Period Job Impacts

Indirect job impacts during construction are estimated using employment multipliers derived by Cambridge Systematics, Inc. from the Regional Input-Output Modeling System (RIMS II) Multipliers for Massachusetts, prepared by the Bureau Of Economic Analysis of the US Department of Commerce (May, 1986). These sources, applied using current wage rates, imply that for every construction job created, 1.71 additional jobs are created within Massachusetts. These results are consistent with an

alternative computation of construction multipliers for Massachusetts provided by the Regional Science Research Institute. Many of these indirect jobs are created by manufacture, fabrication and delivery of construction materials. Input-output tables show that the indirect jobs created by construction activity are predominantly in the fabricated metal products industry, chemical/petroleum products industry, wholesale and retail supplies industry, and business services and real estate-related services industries.

PERMANENT JOBS

Permanent direct jobs are those created by the occupants of the development once it is built. Permanent direct jobs include positions held by employees of the development's tenants, such retail clerks and buyers, and clerical, professional, and managerial workers in the offices. Permanent direct jobs also include the support workers needed to operate, manage, and maintain the buildings.

Permanent indirect jobs are also created off-site, by those businesses who supply goods and services to the new businesses located in the development and their workers. Indirect employment refers to jobs created, generally away from the development site, as a result of new activity associated with the new development. Indirectly created jobs include those with suppliers and wholesalers of merchandise to the retail stores; business equipment and services provided to the hotel businesses; and associated transportation, utilities and other services to all types of tenant businesses. Indirectly created jobs also include retail workers at nearby stores or restaurants patronized by the employees at the development.

Estimation of Direct Permanent Job Impacts

Direct job impacts are estimated based on employment density rates or job creation rates per 1,000 square feet of space, based on actual experience with job creation by tenants of a variety of commercial developments. These rates are derived from the sources indicated in the notes to Tables 4A and B.

Estimation of Indirect Permanent Job Impacts

The indirect jobs which are generated as a result of the spending on various goods and services by, for example, the retail businesses and the office tenants, are estimated based on indirect job creation factors derived by Cambridge Systematics, Inc. from the RIMS II model for Massachusetts, and are

based on a large-scale economic input-output model, as corrected for inflation. This input-output model tracks the flows of economic activity between business sectors. Again, these factors only reflect the permanent indirect jobs created in Massachusetts.

PAYROLL AND SALES IMPACTS

Employment is the most obvious benefit of the project. Because of the wide variety of jobs created, and their location at a variety of sites including the project, it can be useful to measure the magnitude of this benefit in terms of the total payroll which the jobs represents.

The payroll generated by the project is a consequence of the jobs created, whether the jobs are created directly or indirectly. The dollar value of the payroll, in the case of direct jobs, is estimated by using industry average annual wage rates, determined by the Massachusetts Division of Employment Security, applied to the number of jobs created. Payroll generated by indirect jobs is estimated by applying a multiplier, derived from the RIMS II model for Massachusetts, to the direct job payroll.

Business sales attributable to the project include the construction expenditure, the volume of permanent business activity generated by the project's tenants, and the resulting indirect business sales.

Total expenditures, resulting either directly or indirectly from the jobs created by the project, are estimated by using multipliers provided by the RIMS II model.

It should be noted that, given the limited scope of this study, we have not estimated how much of the off-site expenditure that will occur in Massachusetts will occur within the city limits of Boston. As we noted earlier, this will depend on the kinds of firms located in Boston and their competitiveness with firms outside the community.

Estimates of direct sales of goods and services generated by the project are based upon industry norms, established by Cambridge Systematics, Inc., for on-site sales. Indirect sales estimates are based on multipliers derived from the input-output model for Massachusetts cited above.

II. FISCAL IMPACTS

FINDINGS

When complete, the new Boston Crossing will annually generate between $11.0 and $15.1 million in gross revenues directly to the City of Boston. The development will generate between $4.5 and $8.2 million in net new revenue annually for the City of Boston, net of the estimated cost associated with the provision of municipal services to the development or to new residents who will live in the city as a result of the development.

The proposed Boston Crossing development will generate between $2.13 and $2.99 in revenues annually for the City of Boston for each $1.00 in annual expenditures which it will require.

The proposed project will be one of the four largest property taxpayers in the City of Boston.

Boston Crossing will represent between 3.2% and 4.6% of the City of Boston's non-residential property tax base as of 1987, depending on the assessment method used. It will generate an additional 817 residents in the city as a result of the direct creation of 9,349 jobs, an addition of 0.14% to the city's current population.

These conclusions are based on conservative assumptions affecting both revenue and expenditure forecasts. Key fiscal indicators are displayed in Table 5. A complete discussion of methodology and assumptions follows.

TABLE 5

Summary of Fiscal Impacts
Proposed Boston Crossing Project

	Site as Currently Developed	Site With Proposed Development	Impact Net of Current Conditions
Municipal Revenues[1] ($ thousand)	$2,153	$11,161-14,821	$9,008-12,668
Municipal Expenditures ($ thousand)	$2,275	$6,508	$4,233
Revenues Minus Expenditures ($ thousand)	-$122,617	$4,653-8,313	$4,530-8,190
Ratio of Revenues to Expenditures	0.95	1.71-2.28	2.13-2.99

1. Exclusive of intergovernmental transfers.

Source: Cambridge Systematics, Inc., September 1988, based on construction and current employment data provided by Campeau.

METHODOLOGY

The analysis focuses on the impacts of the proposed development on the City of Boston's revenues and expenditures. It forecasts these fiscal effects using a combination of three methods.

The first method is a Proportional Valuation Method. This method is based on the assumption that municipal expenditures are largely affected by the types and amounts of real property in the city or town where the project will be located. The modeling of municipal expenditures based on increases or decreases in property value is widely accepted as an appropriate method for use in fiscal impacts assessments. (See for example, Burchell, Listokin & Dolphin, The new Practitioner's Guide to Fiscal Impact Analysis.)

The second forecasting method is a Proportional Employment Method. This method is premised on the fact that changes in employment also affect municipal costs in predictable ways. In a city which has a relatively large ratio of employment to population (Boston's is approximately 1.08), it is reasonable to assume that changes in employment affect municipal expenditures, through their effects on the city's population and through their impacts on the cost of providing such services as public safety, public works and a spectrum of general government functions.

The third forecasting method is a Proportional Population method. Use of this method is appropriate when the costs and revenues to be modelled are generated by residents rather than businesses. This is the case with expenditures for schools, recreation, and to a lesser degree, the entire spectrum of government services and revenue sources.

Fiscal impact assessments driven by changes in employment, valuation and population are the three conventionally used average cost methods. For this report, Cambridge Systematics has combined these into a single assessment methodology to suit the unique fiscal circumstances of the City of Boston and the Commonwealth of Massachusetts. Cost and revenue estimation procedures have been developed which are driven by original research performed to determine appropriate values for key variables for the City of Boston in the impact assessment model. Revenue and expenditure estimates are derived from a review of data from five consecutive fiscal years (FY 1983-1987).

Further refinements in these estimates can be made through use of the Case Study Method, which bases its conclusions on detailed examination of departmental costs, using in-depth interviews of officials at the agency and precinct level. This research yields information for the development of marginal, rather than average, cost calculations. In the absence of such research, the average cost methods used here are the only reliable estimates of the range of costs and revenues which can be anticipated reasonably from the development as proposed.

Our findings result from the preparation and analysis of two, distinct revenue forecasts, based the use of two estimates of the assessed value of the development upon completion. (See Table 6.) Together, they bound the likely range of municipal revenues which will result from the project.

Estimates of assessed valuation for the proposed project were developed using the Comparables Method. Two other methods were considered and rejected. The Cost Method, which estimates value on the basis of construction costs, was dismissed because its relation to value in downtown Boston is imperfect, and because it is not generally preferred for non-residential applications. The Capitalization Method, which estimates value on the basis of revenues generated, was dismissed as too speculative for a project several years from construction and occupancy, and too complicated for use in this analysis, given the multiple uses on the site already and the existence of a publicly owned parcel of undetermined value.

The comparables method afforded a reasonable means of gauging value. Nine large properties were identified in downtown Boston. Four contained office uses and five contained a mixture of office, retail, and other uses. Assessed values were derived on a per-square-foot basis from these properties, for retail and office uses. A range of value thus derived was applied to the development schedule for the proposed project, and a composite assessed value was developed.

The low and high estimates of assessed value which resulted were $403 million and $583 million. This range is realistic, given an estimated "hard" construction budget of $394 million, and an estimated total project cost (exclusive of land but including all development costs) of $512 million. (See Table 2.)

While the high estimate for assessed value seems credible given the construction budget, even the low assessed value resulted in substantial net revenues to the City of $4.5 million. As noted, the

TABLE 6

Assessed Valuation
Boston Crossing

	Current ($ thous)	Proposed[4] ($ thous) High	 Low	Net Increase ($ thous) High	 Low
Assessed Valuation	$31,196[1]	$583,340	$403,141	$552,144	$371,945
Property Tax Payments[2]	$1,077[3]	$12,635	$8,732	$11,558	$7,655

1. Estimated inclusive of Jordan Marsh complex but exclusive of Lafayette Place.
2. FY 1987
3. Exclusive of $383,188 paid by Lafayette Place in lieu of taxes under the terms of M.G.L. Chapter 121A.
4. In 1987 dollars, based on FY 1988 tax rate. Based on comparable property method.
5. The Lafayette Hotel is under separate ownership and is not included in the project.

Prepared by Cambridge Systematics, Inc., September 1988.

benefit-cost ratio to the City under the low estimate is 2.13. Use of the higher assessed value estimate would result in net revenues of $8.2 million, and a benefit/cost ratio of 2.99. (See Tables 7A and 7B.)

For additional accuracy, a population forecasting technique was used to determine the effect of additional residents resulting from the project's job creation (given the goals of providing 50% of all jobs to Boston residents) on several city services, including schools, libraries, human services and parks and recreation. Additional residents also affect the general government and public safety functions, motor vehicle excise taxes, licenses, permits and miscellaneous charges. These effects have been taken into account in the model.

In each of the two forecast simulations, the revenues and expenditures from the activity currently on the site were also estimated. Tables 7A and 7B show revenue and expenditure estimates for the project as proposed, for the site as currently used, and for the difference between current and proposed uses.

The revenue forecasts include only local (municipal) sources. No estimate of state or federal revenue transfers is included in this analysis. The City's current ratio of locally-generated revenues to costs is 0.67. The effect of excluding intergovernmental revenues is to understate the City's revenues from this or any project; but because these transfer payments are subject to economic conditions and political negotiation, their inclusion in a fiscal impact analysis may be misleading. The Boston Crossing project, as proposed, generates substantial net benefits to the City even without reference to intergovernmental revenues of any kind.

The impact assessment includes only those fiscal effects which are directly attributable to permanent employment within the project and its impact on the City's tax base, employment base and population. Indirect impacts, including additional business activity generated off-site, have not been incorporated. The economic impact analysis, previously presented, found that indirect employment and sales impacts equal to the on-site levels. A portion of these indirect benefits will accrue to the City of Boston.

TABLE 7A

Proposed Boston Crossing
Municipal Impact Analysis - Low Estimate of Assessed Value

	Major Influence	Current	Proposed	Difference
REVENUES				
Real Estate Tax	Value	$1,509,787	$9,481,907	$7,909,120
P.I.L.O.T.		$383,188	$383,188	$0
Motor Vehicle Excise Tax	Population	$50,594	$77,148	$26,555
Local Excise Tax	Employment	$64,771	$387,244	$322,473
Licenses and Permits	Empl/Pop	$44,863	$164,295	$119,432
Dept. Charges and Misc.	Employment	$99,587	$514,108	$414,520
Inter-governmental Revenue (State & Federal)		$0	$0	$0
TOTAL REVENUES		$2,152,790	$11,161,131	$9,008,341
EXPENDITURES				
General Government	Employment	$127,918	$468,451	$340,533
Public Safety (Police/Fire)	Employment	$428,270	$1,568,375	$1,140,104
Public Works	Employment	$130,400	$477,538	$347,139
Property & Development	Employment	$54,276	$198,765	$144,489
Libraries	Population	$40,581	$61,880	$21,299
Parks and Recreation	Population	$21,953	$33,475	$11,522
Human Services	Population	$15,619	$23,817	$8,198
Schools	Population	$775,460	$1,182,467	$407,007
Other	Employment	$680,931	$2,493,645	$185,890
TOTAL EXPENDITURES		$2,275,407	$6,508,412	$2,606,181
REVENUES - EXPENDITURES		($122,617)	$4,652,719	$4,775,336
REVENUES / EXPENDITURES		0.95	1.71	3.46

1. Includes revenue from real estate occupied by project employees living in Boston.

Prepared by Cambridge Systematics, Inc.

TABLE 7B

Proposed Boston Crossing
Municipal Impact Analysis - High Estimate of Assessed Value

	Major Influence	Current	Proposed	Difference
REVENUES				
Real Estate Tax[1]	Value	$1,509,787	$13,295,075	$11,785,289
P.I.L.O.T.		$383,188	$383,188	$0
Moter Vehicle Excise Tax	Population	$50,594	$77,148	$26,555
Local Excise Tax	Employment	$64,771	$387,244	$322,473
Licences and Permits	Empl/Pop	$44,863	$164,295	$119,432
Dept. Charges and Misc.	Employment	$99,587	$514,108	$414,520
Intergovernmental Revenue (State and Federal)		$0	$0	$0
TOTAL REVENUES		$2,152,790	$14,821,059	$12,668,269
EXPENDITURES				
General Government	Employment	$127,918	$468,451	$340,533
Public Safety (Police/Fire)	Employment	$428,270	$1,568,375	$1,140,104
Public Works	Employment	$130,400	$477,538	$347,139
Property & Development	Employment	$54,276	$198,765	$144,489
Libraries	Population	$40,581	$61,880	$21,299
Parks and Recreation	Population	$21,953	$33,475	$11,522
Human Services	Population	$15,619	$23,817	$8,198
Schools	Population	$775,460	$1,182,467	$407,007
Other	Employment	$680,931	$2,493,645	$185,890
TOTAL EXPENDITURES		$2,275,407	$6,508,412	$2,606,131
REVENUES - EXPENDITURES		($122,617)	$8,312,646	$8,435,264
REVENUES / EXPENDITURES		0.95	2.28	2.99

1. Includes revenue from real estate occupied by project employees living in Boston.

Prepared by Cambridge Systematics, Inc.

TABLE 7 Continued

SOURCES:

Boston Redevelopment Authority

City of Boston, Treasury and Assessing Department

Campeau Corporation

Bureau of Economic Analysis, Regional Economic Analysis Division

Urban Land Institute

Based upon the estimated total payroll and sales levels generated by the Boston Crossing project (see Table 4B) it is possible to estimate the approximate level of Massachusetts sales and personal income tax generated by the project assuming that half of estimated total sales are end user sales and that 40% of these are exempt (food and clothing), the Boston Crossing project will generate $20.8 million in sales tax revenue. The project will also generate between $21 million and $29 million in total state personal income tax revenue.

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